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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/665,546	09/22/2003	Hiroshi Taira	117247	5939

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EXAMINER

MRUK, GEOFFREY S

ART UNIT	PAPER NUMBER
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2853

DATE MAILED: 08/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

*Handwritten signature*

**Office Action Summary**

Application No.

10/665,546

Applicant(s)

TAIRA, HIROSHI

Examiner

Geoffrey Mruk

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 July 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 20 July 2006 has been entered.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Suzuki et al. (US 7,004,565 B2).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in

the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

With respect to claim 1, Suzuki discloses an ink-jet head (Column 5, lines 45-46), comprising:

- a passage portion (Figs. 7 and 12, element 4) in which a plurality of ink ejecting nozzles (Fig. 7, element 8) are formed, the passage portion including a plurality of individual ink passages (Fig. 7, element 32) running to the nozzles through pressure chambers (Fig. 7, element 10);
- a spaced portion (Fig. 12, element 73) spaced apart from and facing the passage portion;
- a driving portion (Fig. 7, element 21) bonded to a surface of the passage portion facing the spaced portion, for imparting squirting energy to ink in the pressure chambers (Column 18, lines 54-62);
- a power supply member (Fig. 12, element 50) electrically connected (Column 9, lines 13-16) with the driving portion for supplying driving signals to the driving portion;
- a protrusion (Fig. 12, element 73a) provided in at least either of the surface of the spaced portion facing the passage portion and the surface of the passage portion facing the spaced portion (Column 19, lines 15-16); and
- a sealing member (Fig. 12, element 85) disposed adjacent to the protrusion for sealing a space between the passage portion and the spaced portion,

- wherein the sealing member is on a lateral side (Fig. 12, i.e. right side of element 73) of the ink-jet head at a location where the power supply member is drawn out (Column 19, lines 13-20).

With respect to claim 2, Suzuki discloses a bonded portion (Column 18, lines 54-62) bonded to the passage portion (Fig. 12, element 4) while supporting the spaced portion (Fig. 12, element 73) to maintain a distance between the spaced portion and the passage portion, wherein the protrusion (Fig. 12, element 73a) is provided opposite to the bonded portion with respect to the driving portion (Fig. 7, element 21).

With respect to claim 3, Suzuki discloses the protrusion (Fig. 12, element 73a) is provided on the spaced portion (Fig. 12, element 70).

With respect to claim 4, Suzuki discloses the protrusion (Fig. 13, element 73a) faces the passage portion (Fig. 13, element 4) and has such a height that a front end of the protrusion is positioned at a level beyond a level of a surface of the driving portion (Fig. 13, element 121) facing the spaced portion (Fig. 13, element 73).

With respect to claim 5, Suzuki discloses the protrusion (Fig. 13, element 73a, i.e. left or right edged of element 73a) does not face the passage portion (Fig. 13, element 4) and has such a height that a front end of the protrusion is positioned at a level beyond a level of the surface of the passage portion facing the spaced portion (Fig. 13, element 73).

With respect to claim 6, Suzuki discloses the power supply member (Fig. 12, element 50) is in abutment with at least either of the protrusion (Fig. 12, element 73a) and the passage portion (Fig. 12, element 4).

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With respect to claim 7, Suzuki discloses the power supply member (Fig. 12, element 50) is in abutment with both of the protrusion (Fig. 12, element 73a) and the passage portion (Fig. 12, element 73).

With respect to claim 8, Suzuki discloses the plurality of pressure chambers (Fig. 7, element 10) are arrayed in matrix along a bonded surface bonded to the driving portion (Fig. 8),

- the driving portion (Fig. 10A, element 21) has piezoelectric sheets (Column 15, lines 43-45) extending across the plurality of pressure chambers
- and a plurality of individual electrodes (Column 15, line 55) arranged on the piezoelectric sheets to correspond to the respective pressure chambers and is bonded to the passage portion (Column 15, lines 60-67) and
- the power supply member (Fig. 10A, element 50) supplies driving signals to the respective individual electrodes of the driving portion (Column 9, lines 13-16).

With respect to claim 9, Suzuki discloses a whole area of the driving portion (Fig. 12, element 21) faces the spaced portion (Fig. 12, element 73).

With respect to claim 10, Suzuki discloses the spaced portion (Fig. 12, element 73) includes an ink reservoir (Fig. 12, elements 3) in which ink is stored and from which the stored ink is fed to the individual ink passages (Fig. 7, element 72; Column 7, lines 38-46) of the passage portion (Fig. 7, element 4).

With respect to claim 11, Suzuki discloses an ink-jet head (Column 5, lines 45-46), comprising:

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- a passage unit (Figs. 7 and 12, element 4) in which a plurality of ink ejecting nozzles (Fig. 7, element 8) are formed, the passage unit including a plurality of individual ink passages (Fig. 7, element 32) running to the nozzles through pressure chambers (Fig. 7, element 10);
- a reservoir unit (Fig. 12, element 3) including an ink reservoir in which ink is stored and from which the stored ink is fed to the passage unit (Column 7, lines 38-46);
- an actuator unit (Fig. 7, element 21) bonded to the passage unit for imparting squirting energy to the ink in the pressure chambers; and
- a power supply member (Fig. 12, element 50) electrically connected (Column 9, lines 13-16) with the actuator unit for supplying driving signals to the actuator unit;
- wherein the reservoir unit has a bonded surface bonded (Column 15, lines 60-67) to the passage unit and a spaced surface (Fig. 12, element 73) extended across and spaced apart from the actuator unit,
- a protrusion (Fig. 12, element 73a) is provided in an area of the spaced surface of the reservoir unit (Fig. 12, element 3), the area is opposite to the bonded surface with respect to an area facing the actuator unit, and
- the power supply member (Fig. 12, element 50) is in abutment with both of the protrusion and the passage unit (Fig. 12), and
- and a sealing member (Fig. 12, element 85) for sealing a space between the passage unit and the reservoir unit is disposed at the abutment portion with the

sealing member on a lateral side (Fig. 12, i.e. right side of element 73) of the ink-jet head at a location where the power supply member is drawn out (Column 19, lines 13-20).

With respect to claim 12, Suzuki discloses a width of the passage unit (Fig. 12, element 4) is not more than a width of the reservoir unit (Fig. 12, element 73).

### ***Priority***

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1 and 11 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey Mruk whose telephone number is 571 272-2810. The examiner can normally be reached on 7am - 330pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on 571 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GSM  
7/26/2006



**STEPHEN MEIER**  
**SUPERVISORY PATENT EXAMINER**